Integrates industry’s best air-bearing shaker (Models K394B30 and K394B31) for accurate, automated resonance search testing up to 50 kHz

Provides early warning detection technique for damaged sensors

Allows user to select frequency resolution for optimal sweep measurements

Easy-to-use software GUI automates sweep measurement and interface with 9155 calibration software and database

Sweep runs directly on the K394B30 or K394B31 air-bearing shaker systems, eliminating the need to remount the sensor under test, streamlining sensor calibration throughput

Provides rapid, efficient measurements in just seconds

The Accelerometer Calibration Workstation with Model 9155D-550 Resonance Test option allows the user to measure a sensor’s mounted resonant frequency using the Model K394B30/B31 state-of-the-art precision air-bearing shaker. Unlike other air-bearing shakers, the resonance frequency of the internal reference of the K394B30/B31 shaker is > 70 kHz giving it a truly usable range for resonant searches up to 50 kHz. As the search is done with the shaker, no remounting of the sensor is required, making the resonance search take only seconds after the normal back-to-back calibration is performed.

By measuring the mounted resonant frequency of a sensor, tiny cracks and other flaws in the sensor can be detected well before the sensor actually fails.

The Accelerometer Calibration Workstation Model 9155 features back-to-back comparison calibration of piezoelectric (PE), capacitive (VC) and piezoresistive (PR) mode accelerometers for both sensitivity and phase according to ISO 16063-21. Printed certificates fulfill the requirements set forth by ISO 17025 for calibration certificates.
The 9155D-550 Resonance Test option seamlessly integrates with the 9155 Accelerometer Calibration Workstation software. With just a few mouse clicks, the calibration technician can go from frequency response calibration to resonance search. The Model 9155D-550 Resonance Test option requires either the Model 9155D-830 K394B30 Air-Bearing Shaker or Model 9155D-831 K394B31 Air-Bearing Shaker.

### RESONANCE TEST OPTION

The Modal Shop, Inc. offers structural vibration and acoustic sensing systems and services for various applications in design and test laboratories as well as manufacturing plants. An extensive sound and vibration rental program, precision calibration systems, and both modal and vibration shakers are designed to simplify test phases. Non Destructive Testing Systems help manufacturers provide 100% quality inspection of metal components. The Modal Shop, Inc. is a subsidiary of PCB Piezotronics, Inc., and PCB® is a wholly owned subsidiary of MTS Systems Corporation.

### SPECIFICATIONS

<table>
<thead>
<tr>
<th>Performance</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range</td>
<td>5 kHz to 50 kHz</td>
</tr>
<tr>
<td>Frequency Resolution</td>
<td>12.5, 25, or 50 Hz</td>
</tr>
<tr>
<td>Test Technique</td>
<td>Back-to-back sweep</td>
</tr>
<tr>
<td>Mounted Resonance</td>
<td>&gt; 70 kHz</td>
</tr>
<tr>
<td>Software Compatibility</td>
<td>9155 v4.0.0 or later</td>
</tr>
<tr>
<td>Hardware Compatibility</td>
<td>NI PCI-4461</td>
</tr>
</tbody>
</table>

### Other System Options

- **9155D-100**: 19 in Rack Integration. Approx. 36.5 in H x 21.75 in W x 26 in D [93 cm x 55 cm x 66 cm]. Integrates components in 19 in rack.
- **9155D-120**: Shaker Mount. Provides wood pedestal to support calibration shaker. Requires user to fill with sand (not included).
- **9155D-160**: Tool Kit. Includes torque wrench, screwdrivers, crescent wrenches, toolbox, etc.
- **9155D-350**: Calibration Label Printing. Provides automatic calibration label printing using a Zebra thermal transfer label printer.
- **9155D-422**: Basic ICP Signal Conditioning. Adds signal conditioner for ICP and charge mode sensors.
- **9155D-443**: Dual-mode Charge Amplifier. Computer control and automated switching between ICP and charge mode sensors.
- **9155D-501**: Linearity. Provides for multipoint sensor linearity checks via sinusoidal vibration up to 40 g.
- **9155D-525**: Shock Calibration. Provides for verification of shock accelerometers from 20 g to 10 000 g.
- **9155D-771**: Low Frequency (0.5 Hz – 500 Hz). Long stroke shaker with SmartStroke™ technology and accelerometer reference sensor.
- **9155D-779**: Low Frequency (0.1 Hz – 500 Hz). Long stroke shaker with SmartStroke™ technology, accelerometer and optical reference sensors.
- **9155D-831**: K394B31 Air-Bearing Shaker. Adds precision high-frequency air-bearing shaker 5 Hz – 20 kHz.
- **9155D-961**: Hammer Calibration. Allows calibration of instrumented impact hammers, includes 9961C cal fixture.

### 9155-550 Software

1. Frequency Spectrum Sensor Under Test
2. Frequency Spectrum Standard Sensor
3. Frequency Response Function
4. Automated resonant frequency selection
5. Technician-controlled frequency range, resolution and amplitude

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[1] Mounted resonance of the internal reference sensor in the K394B30/B31